

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007016**Date Inspected:** 19-Jan-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei / Sun Bo**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Components**Summary of Items Observed:**

The Caltrans (CT) Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

**OBG Sub-Assembly Bay 2:**

The QA Inspector randomly observed ZPMC Non-Destructive Testing (NDT) Technician Xu Hai, utilizing the Magnetic Particle Testing (MT) Method to attempt to perform a final MT examination on the cover pass of the fillet welds attaching the Tower Diaphragm Reinforcing Flange (TDRF) to 68M West Tower Diaphragm at Weld Joint (WJ) WSD1-SA416-1 and the edges of the butt splices in the TDRF. ZPMC QC and the QA Inspector observed indications in several of the TDRF butt splices and ZPMC QC rejected those WJ's. The QA Inspector randomly observed ZPMC QC mark those areas for repair.

The QA Inspector randomly observed ZPMC Non-Destructive Testing (NDT) Technician Xu Hai, utilizing the Magnetic Particle Testing (MT) Method to attempt to perform a final MT examination on the cover pass of the fillet welds attaching the TDRF to 68M North Tower Diaphragm at WJ NSD1-SA359-14 and the edges of the butt splices in the TDRF. ZPMC QC and the QA Inspector observed indications in several of the TDRF butt splices and ZPMC QC rejected those WJ's. The QA Inspector randomly observed ZPMC QC mark those areas for repair.

**OBG Sub-Assembly Bay 3:**

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The QA Inspector randomly observed ZPMC welder Yang Xu He ID 057795, utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2F position with ZPMC WPS WPS-B-P-2112(2113), to fit up and tack weld Flange X6F to Floor Beam Diaphragm FB003-155 at WJ 006. The QA Inspector randomly observed ZPMC QC verifying weld parameters. Weld parameters appeared to comply with contract requirements.

OBG Sub-Assembly Bay 6:

The QA Inspector randomly observed a ZPMC cutting torch operator, utilizing a track mounted torch cutting apparatus to cut bevels in 89M cross web plates.

OBG Sub-Assembly Bay 7:

The QA Inspector randomly observed ZPMC welder Zhang Ru You ID 049771, utilizing the SMAW Process in the 2F position with ZPMC WPS WPS-B-P-2112-FCM, to fit up and tack weld T-Ribs to Side Plate SP497-001 at WJ 003/004 and 005/006. The QA Inspector randomly observed ZPMC QC verifying weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Sun Dao Can ID 250833, utilizing the SMAW Process in the 2F position with ZPMC WPS WPS-B-P-2112-FCM, to fit up and tack weld T-Ribs to Side Plate SP736-001 at WJ 001/002 and 003/004. The QA Inspector randomly observed ZPMC QC verifying weld parameters. Weld parameters appeared to comply with contract requirements.

OBG Sub-Assembly Bay 9:

The QA Inspector randomly observed ZPMC welder Jiang Mao Fang ID 201250, utilizing the Flux Cored Arc Welding (FCAW) Process in the 3G position with ZPMC WPS WPS-B-T-2233, to weld the splice between U-Rib sections U-93 and U-143 WJ DP219-001-191. The QA Inspector randomly observed ZPMC QC verifying weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC magnetic drill operators drilling bolt holes in U-Ribs prior to forming.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

No relevant conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150-0042-2372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Franco,Charlie

Quality Assurance Inspector

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**Reviewed By:** Clifford,William

QA Reviewer